

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

In re Brown ) Serial No. 10/824,040  
Applicant, ) Docket No. RSW920040015US1  
For: Mechanism for validating the message format ) Art Unit 2616  
for message channels )  
Examiner: Phan  
Filed: 04/14/2004 )

### **Amendment**

October 29, 2007

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

To the Honorable Commissioner for Patents:

In response to the communication from the Examiner dated July 31, 2007, please amend the application identified above as indicated below.

The following table itemizes the contents of the Applicant's response:

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## I. CLAIM AMENDMENTS

Please amend the claims as indicated in the following listing:

1. (currently amended) A method for validating a message having a message header and a message footer in a message queuing environment wherein the message is validated before the message is sent to a recipient program, comprising:

installing a message validation program on a computer;  
wherein the message validation program performs steps comprising:  
acquiring the message from a sender program;  
analyzing the message;  
comparing the message to a validating criteria; wherein the validating criteria specifies a data that the recipient program will accept;  
determining whether the message is valid; wherein the message is valid only when the data in the message header and the message footer match a validation criteria; and  
indicating an error to the sender program without forwarding the message to the message queue for distribution to the recipient program when the message is not valid.
2. (canceled)
3. (canceled)
4. (canceled)
5. (canceled)

6. (currently amended) The method of claim 5.1 wherein the comparing the message header to the validating criteria step comprises:
  - comparing a message property to a validating criteria property; and
  - wherein the message is valid only if when the message property matches the validating criteria property.
7. (currently amended) The method of claim 6 wherein the comparing the message header to the validating criteria step comprises:
  - comparing a message value to a validating criteria value; and
  - wherein the message is valid only if when the message value matches the validating criteria value.
8. (currently amended) The method of claim 7 wherein the comparing the message body to the validating criteria step comprises:
  - comparing a message type to a validating criteria type; and
  - wherein the message is valid only if when the message type matches the validating criteria type.
9. (currently amended) The method of claim 8 wherein the comparing the message body to the validating criteria step comprises:
  - comparing a message character set to a validating criteria character set; and
  - wherein the message is valid only if when the message character set matches the validating criteria character set.
10. (currently amended) The method of claim 9 wherein the comparing the message body to the validating criteria step comprises:
  - comparing a message format to a validating criteria format; and

wherein the message is valid only if when the message format matches the validating criteria format.

11. (original) The method of claim 10 wherein the message is validated by the sender program.

12. (original) The method of claim 10 wherein the message is validated by a message queue manager.

13. (currently amended) A program product for validating a message in a message queuing environment wherein the message is validated before the message is sent to a recipient program, comprising:

a memory;  
a computer program stored in the memory, the memory, so configured by the computer program, causes a computer to perform steps comprising:  
acquiring the message from a sender program;  
analyzing the message;  
determining whether the message is valid; and responsive to the determination that the message is valid, forwarding the message to a message queue for distribution to the recipient program.

14. (canceled)

15. (currently amended) The program product of claim 14 13, wherein the steps further comprise:

responsive to the determination that the message is not valid, indicating an error to a sender program without forwarding the message to the message queue for distribution to the recipient program.

16. (currently amended) The program product of claim 14 13 wherein the step of analyzing the message comprises:

comparing the message to a validating criteria;

wherein the validating criteria specifies a data that the recipient program will accept;

and

wherein the message is valid only if when the data in the message matches the validating criteria.

17. (currently amended) The program product of claim 16 wherein the message comprises a message header and a message body and wherein the step of analyzing the message further comprises:

comparing the message header to the validating criteria;

comparing the message body to the validating criteria; and

wherein the message is valid only if when the data in the message header and the message body match the validating criteria.

18. (currently amended) The program product of claim 17 wherein the comparing the message header to the validating criteria step comprises:

comparing a message property to a validating criteria property; and

wherein the message is valid only if when the message property matches the validating criteria property.

19. (currently amended) The program product of claim 17 wherein the comparing the message header to the validating criteria step comprises:

comparing a message value to a validating criteria value; and

wherein the message is valid only if when the message value matches the validating criteria value.

20. (currently amended) The program product of claim 17 wherein the comparing the message body to the validating criteria step comprises:

comparing a message type to a validating criteria type; and

wherein the message is valid only if when the message type matches the validating criteria type.

21. (currently amended) The program product of claim 17 wherein the comparing the message body to the validating criteria step comprises:

comparing a message character set to a validating criteria character set; and

wherein the message is valid only if when the message character set matches the validating criteria character set.

22. (currently amended) The program product of claim 17 wherein the comparing the message body to the validating criteria step comprises:

comparing a message format to a validating criteria format; and

wherein the message is valid only if when the message format matches the validating criteria format.

23. (currently amended) The program product of claim 14 13 wherein the message is validated by the sender program.

24. (currently amended) The program product of claim 14 13 wherein the message is validated by a message queue manager.

25. (currently amended) An apparatus for validating a message from a sender program in a message queuing environment wherein the message is validated before the message is sent to a recipient program, the apparatus comprising:

a computer connected to a memory and to a network;  
a program encoded on the memory, the computer being directed by the program to  
perform the following steps:

acquiring the a message having a message header and a message body;  
acquiring a validating criteria; wherein the validating criteria specifies a data that the  
recipient program will accept;  
comparing the message header to the validating criteria;  
comparing the message body to the validating criteria;  
wherein the message is valid only when the data in the message header and the  
message body match the validating criteria; and  
wherein the validating criteria specifies a data that the recipient program will accept;  
comparing a message property to a validating criteria property;  
wherein the message is valid only if when the message property matches the  
validating criteria property;  
comparing a message value to a validating criteria value;  
wherein the message is valid only if when the message value matches the validating  
criteria value;

comparing a message type to a validating criteria type;  
wherein the message is valid only if when the message type matches the validating criteria type;

comparing a message character set to a validating criteria character set;  
wherein the message is valid only if when the message character set matches the validating criteria character set;

comparing a message format to a validating criteria format;  
wherein the message is valid only if when the message format matches the validating criteria format;

determining whether the message is valid;  
responsive to the determination that the message is valid, forwarding the message to a message queue for distribution to the recipient program; and  
responsive to the determination that the message is not valid, indicating an error to a sender program without forwarding the message to the message queue for distribution to the recipient program.

26. (currently amended) The method-apparatus of claim 2510 wherein the message is validated by the sender program.

27. (currently amended) The method-apparatus of claim 2510 wherein the message is validated by a message queue manager.

## II. REMARKS

### Summary of the Response:

The Specification is amended to correct cross reference errors.

Claims 1 through 27 were presented.

Claims 2 through 5 and 14 have been canceled.

Claims 1, 6 through 10, 13, and 15 through 27 have been amended.

Claims 1, 6-13, and 15-27 remain pending.

### Allowable Subject Matter

The examiner allowed independent claim 25, subject to the correction of an antecedent basis rejection under 35 USC §112. Applicants have amended claim 25 to overcome this rejection and to make further improvements to the claim. The examiner objected to claims 6 to 12 as being dependent upon the rejected base claims (claims 1 to 5), but stated that claims 6-12 would be allowable if rewritten in independent form including all of the limitations of the base claims and any intervening claims. Claim 1 has been amended to include elements of claims 2 to 5 and claims 6 to 12 now depend from the amended claim 1 and include all of the elements of claim 1. For the reasons explained below, applicants submit that amended claim 1 distinguishes over the prior art without the incorporation of claim 6. Applicants respectfully submit that claims 6 to 12 are now in a condition for allowance because amended claim 1 is allowable for the reasons discussed below.

### Claim Objections

The examiner advised applicant that should claims 11-12 be found allowable, claims 26-27 will be objected to under 37 CFF 1.75 as being substantial duplicates thereof (both sets depend from claim 10). Claims 11 and 12 remain depending from claim 10 and are now in a

condition for allowance as discussed above in connection with claims 6 to 12. Claims 26 and 27 have been amended to depend from allowable claim 25 rather than claim 10. Accordingly claims 26 and 27 are also in a condition for allowance.

#### **Claim Rejections - 35 USC § 112**

The examiner states that there is an insufficient antecedent basis for “the sender program” in claims 11, 23, and 26. Applicants have overcome this rejection by their amendments to claims 1, 13 and 25 respectively. The examiner further states that there is insufficient antecedent basis for “the message header”, “the validating criteria” and “the message body” in claim 25. Claim 25 has been amended to overcome these rejections.

#### **Claim Rejections - 35 USC § 101**

The examiner rejected claims 13-24 under 35 U.S.C. §101 because the claimed invention is directed to non-statutory subject matter, specifically, as directed to “computer program product” or “a software routine.” The applicants have combined the elements of claims 13 and 14 and amended the resulting claim 13 to overcome this rejection. Specifically, the amended claims include a memory, a program stored in the memory, and the memory so configured by the program, cause the computer to perform the steps listed in the claim.

#### **Claim Rejections - 35 USC § 102**

The examiner rejected claims 1-3 under 35 U.S.C. §102(e) as being anticipated by Hughes (US 5,982,893, hereinafter “Hughes”).

Applicants have amended claim 1 to include elements from claims 2 to 5. Claims 2 to 5 are canceled. The examiner acknowledged on page 6 of the Office Action that Hughes does not disclose that “the step of analyzing the message further comprises comparing the message to a validating criteria” (from original claim 4). Hughes also fails to teach or suggest the comparison

of a message header and footer with a validation criteria (from original claim 5). Accordingly, the amended claim 1 is not anticipated by Hughes under 35 USC §102.

#### Claim Rejections - 35 USC § 103

The applicants confirm that the subject matter of each of the pending claims was commonly owned at the time the inventions were made.

The examiner rejected claims 4-5 under 35 U.S.C. §103(a) as being unpatentable over Hughes in view of Cimo et al. (US 2004/0030788, "Cimo").

Claims 4 and 5 have been canceled and claim 1 now includes the elements of claims 1 to 5. Amended claim 1's dependent claims (6 to 12) have already been found allowable. Amended claim 1 states:

1. A method for validating a message having a message header and a message footer in a message queuing environment wherein the message is validated before the message is sent to a recipient program, comprising:

installing a message validation program on a computer; wherein the message validation program performs steps comprising:

acquiring the message from a sender program;

analyzing the message;

comparing the message to a validating criteria; wherein the validating criteria specifies a data that the recipient program will accept;

determining whether the message is valid; wherein the message is valid only when the data in the message header and the message footer match a validation criteria; and

indicating an error to the sender program without forwarding the message to the message queue for distribution to the recipient program when the message is not valid.

Applicants respectfully submit that the prior art of record does disclose amended claim 1. The examiner states that Cimo is in the "same field of endeavor." But neither Hughes nor Cimo are message queuing and forwarding systems.

Applicants' embodiments operate in a message queuing environment wherein messages passing between sender programs 94 and recipient programs 93 are verified before the messages

are sent to the recipient [0005; 0027; Fig. 3 and 4]. In the event of an error, the sending program is notified that the message may not be sent [0005]. Both the message header and the message footer are validated [Fig. 6]. Applicants' message queue 150 may be installed on each sending computer 96, or they may be installed on an intermediate message queuing server 95 [0027; Fig. 3 & 4]. In either case, applicants improve the efficiency of the networks used to forward messages to the recipient programs. Multiple sending and receiving computers are supported [Fig. 3 and 4].

Hughes processes raw transaction messages (typically EDI) to insure communication between different computer systems [3:12+]. Hughes receives an incoming raw transport message, removes the transport layer and related data [11:35-36], converts the message [12:23-43] and verifies the converted message [13:14+]. See generally Hughes Fig 4A-C. A primary objective of the Hughes invention is to insure that different computer systems process transaction messages (e.g. commercial transactions) in a mutually understood and verifiable manner [2:13-23]. Hughes attempts to eliminate incompatibilities in otherwise properly formatted messages passing between these different computer systems [2:38-51]. Hughes will store messages for later verification if there is an error in the message ("experience database 409"; 13:38-55; 14:47-58; Fig. 5B).

Cimo does not cure the deficiencies of Hughes. Cimo is not a message queuing system adapted to receive messages and notify the sender of errors before they are transmitted to the recipient. Cimo is an anti-hacking system that is intended to automatically protect web servers from intrusion in real time [0003; 0007-0008]. As such, Cimo is essentially a recipient side system used to process all inbound messages (called client messages 303), regardless of their origin or their form and format [Fig 2, 3] utilizing a "controlled system" (304) before reaching a

protected computer (e.g. WEB server 313). The “controlled” or “trusted” system runs the same software as the protected system to detect response differences and block malformed messages before they can damage the protected system. By its nature, Cimo does not improve the efficiency of message transmissions over a network, nor could Cimo be installed on a client side (sender) system. All of Cimo’s network message traffic is processed by a controlled system that mirrors a protected computer system. All of Cimo’s message traffic flows over the network to the recipient system before reaching Cimo’s interface. Conversely, applicants’ embodiments may be installed on each sending computer, or on a message queuing server that is capable of serving multiple recipient computers [0027]. Malformed messages are never transmitted to the recipient system.

Accordingly, amended claim 1 is believed to be in a condition for allowance. Claims 6 to 12 are already allowed, subject to the allowability of claim 1.

#### Conclusion

For the foregoing reasons, applicant submits that the remaining claims are now in condition for allowance. Please contact Applicants’ counsel at 214-231-4703 if a telephone conference would be helpful in passing this case to issue.

Respectfully submitted,

*Rudolf O. Siegesmund*  
Rudolf O. Siegesmund  
Registration No. 37,720  
Gordon & Rees LLP  
Suite 2800  
2100 Ross Avenue  
Dallas, Texas 75201  
214-231-4703  
214-461-4053 (fax)  
[rsiegesmund@gordonrees.com](mailto:rsiegesmund@gordonrees.com)